

LEVIS (R. J.)

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PRIORITY IN THE ANÆSTHETIC USE OF THE BROMIDE OF ETHYL.

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IN a recent article, in the issue of this journal of January 17, I mentioned the claim of Dr. Turnbull to priority in the production of anæsthesia in the human subject with the bromide of ethyl. In his brochure on anaesthetics he distinctly makes this claim in these words: "*I was the first to experiment with this ether on man.*" Whilst feeling no doubt that Dr. Turnbull was unconscious that he had long been preceded in such administration, there are clear and decided records of the fact.

Mr. Nunneley, of Leeds, England, demonstrated the anæsthetic properties of the bromide of ethyl on some of the lower animals in the year 1849, and in 1865 he used it frequently on patients undergoing surgical operations. The records of these facts occur in the "Transactions of the Provincial Medical and Surgical Association" for 1849, vol. xvi, page 206, and as a part of the "Proceedings of the British Medical Association," *British Medical Journal*, August 19, 1865, page 192. It seems also probable that a chemical substance with which chemists have been familiar since its discovery in the year 1827, and the anæsthetic properties of which have been so long known, has received the practical attention of others of the many investigators in the domain of anæsthesia.

In the volume first referred to is an article on "Anæsthesia and Anæsthetic Substances generally," by Thomas Nunneley, Esq., F.R.S., etc., Senior Surgeon to the Leeds General Eye and Ear Infirmary, etc., in which are recorded a series of experiments with the anæsthetic effects of the bromide of ethyl on the lower animals. These experiments, the results of which have been confirmed by some more recently made, agree in demonstrating the rapidity of the action of this agent and the speedy recovery from its impression.

After recording his observations with a number of anæsthetic substances, he says, "The bromide of ethyl is a pleasant, rather fragrant ether, not of a very penetrating smell, is sweetish to the taste, at first rather insipid than not, but afterwards it is more pungent. It possesses very considerable anæsthetic power. Its inhalation does not appear to be unpleasant. When not used in large quantities, the animals soon recovered from a condition of complete insensibility, without any disagreeable symptom; and when given, as in No. 98, in a full dose, the creature sank down, without moving a muscle, merely from its weight, into a state of the most profound anæsthesia, within one minute after being put into the jar. The fact of respiration continuing at all during fourteen minutes in such a condition, shows that this fluid is more manageable than some others."

In reference to the choice of anæsthetics, Mr. Nunneley, in the same place, remarks, "The bromide of ethyl is a safe, pleasant, and effectual anæsthetic; but, inasmuch as it does not possess any such qualities as to render its employment more advantageous than some other substances, the very great cost of it will, unless this can be materially reduced, entirely prevent its use. One manufacturer would not prepare it for me under one guinea an ounce."

Happily, the impediment of high cost referred to does not now exist, and with an increased production, stimulated by the demand which is, I believe, destined soon to occur, the price of the article will be much lower. An analysis of the results of Mr. Nunneley's experiments on the lower animals with a great variety of anæsthetics would seem to indicate that the bromide of ethyl has qualities which are not equalled by any other substance; and such an inference may well be drawn from his own guarded statements.

In regard to the record of Mr. Nunneley's application of the anaesthetic powers of this substance to the human subject, the following paragraph from the journal referred to will be sufficient: "Mr. Nunneley showed to the members two substances, the bromide of ethyl and the chloride of olefiant gas, which for some time past he had used as anaesthetics. He stated that he had not lately performed any serious operation, either in private practice or at the Leeds General Infirmary, without the patient being rendered insensible by one or the other of these agents, each of which he believed to possess important advantages over chloroform. They were among the many analogous bodies experimented upon by him, and were favorably mentioned in his essay on Anæsthesia, which was published in the Transactions of the Association for 1849. At that time the difficulty and cost of their manufacture were too great to allow of their being commonly used. This difficulty had, however, been overcome, and, should their use become general, they can be made at a cost not exceeding that of chloroform, if not at less. They both act speedily, pleasantly, and well. The patient might be kept insensible for any length of time while the most painful and prolonged operations were being performed. No disagreeable symptoms had, in any case, resulted from

their use. They were prepared for Mr. Nunneley by Mr. Squire, of Oxford Street, London, from whom they might be obtained."

In the claim to priority in the demonstration of the anaesthetic properties of the bromide of ethyl and its application to the prevention of human suffering, I deem it of importance to make the correct award, as my continued experience with it, in the surgery of a large general hospital and in private surgical practice, impresses me with the conviction that it is the best anaesthetic known to the profession.

